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THE
ONTARIO
COMMERCIAL
FISHERIES



HOW AND WHY
DESTROYED

A PAMPHLET

BY

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The EDITH *and* LORNE PIERCE
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Queen's University at Kingston

The Ontario Commercial Fisheries

HOW AND WHY DESTROYED

I.

In one of those old English country churches the congregation had become so reduced as to be almost a scandal. Some of the ladies persuaded the rector to allow them to decorate the church at Christmas time to make it attractive and draw in the wavering worshippers. This was done elaborately with evergreens, holly, mistletoe and flowers. It all failed to fill another seat. When the rector went into the pulpit he looked around the church, gave a sigh, and said: "My dear brethren, there is a great deal of cover, but very little game."

That is very much the condition of the forests and fields, streams and lakes in Ontario. Laws, regulations, water and cover we have in plenty, but very little fish and game.

A mental effort is required to dissect the fishery reports. Probably not one man in a hundred thousand attempts it. In 1903 "juggling with the figures" began. The catch of fish in that year was valued at \$1,535,144. This catch, had it been valued according to precedent, would be \$1,200,362. An apparent surplus of \$334,782 was created.

MISLEADING FIGURES.

To the ordinary reader (and in commercial fishing matters almost the entire community are "ordinary") this would have the appearance of an increased catch and a prosperous year. But more than \$300,000 had been added to values, in the same way that an American life insurance company manufactures a reserve. This system has been continued. The

catch of fish in 1905 is valued upon the same misleading plan at \$1,705,963, an excess of nearly \$500,000 over "old prices." The Ottawa Government, up to A.D. 1898, while managing these fisheries, had adhered strictly to uniform valuation of the catch as one safe guide to detect depletion or show increase.

A TREMENDOUS DECREASE.

The facts are that since the "Ontario blight" struck the fisheries in 1899, there has been a decrease in the yearly catch of nearly 5,000,000 lbs. It is the depletion of the waters, and the consequent greater expense in catching fish, which has compelled a rise in prices. More plant, more tugs, boats and nets are now required to take even a lesser quantity of fish. During the management of the late Ontario Government, steam tugs increased from 83 tugs and 430 men to 127 tugs and 714 men, and those, tugs of greater tonnage and fishing capacity; 1,262 boats and 2,417 men were increased to 1,462 boats and 3,247 men, and gill nets increased 300,000 yards. Seines were increased 50 per cent., 372 pound nets increased to 530, 406 hoop nets to 554. New, reserved and exceptionally valuable waters were opened up for spoliation, and improved machinery introduced for lifting nets.

NETS MULTIPLY, FISH DECREASE.

Evidence of a very convincing kind has recently been given before the Dominion Fishery Commission, that about five times the quantity of gill nets licensed were habitually fished; in fact, that for some years, when a gill net license was issued, the holder fished the extreme length of gill nets he and his men could handle, and not infrequently with a larger tug and a machine net lifter. This had become practically the "custom of the country." It is now a common saying among fishermen: "If I don't catch it somebody else will!" With all these adjuncts and advantages the catch of fish of 1905 is reduced 5,000,000 lbs., but it is valued at

nearly \$500,000 in excess of 1899 prices. That this should be paraded as a substantial increase in the value of the fisheries and a benefit to the province is not a compliment to the Ontario reader.

TO SUPPLY AMERICANS.

All this is done to supply the Americans with 95 per cent. of the catch, leaving Ontario with 5 per cent. This large and continuous shipment of our fish to the United States has created the fish famine in Ontario. The Department of Fisheries has hitherto been exceptional in not being closely and continuously scrutinized by the press and the public.

DOUBLE PRICE, POOR QUALITY.

A revenue of about \$46,303 is obtained from licenses to fish. The value put upon the fish has no bearing whatever upon the question of revenue. The license fees paid for:

530 pound nets gave a revenue of.....	\$26,500
Tugs and 3,910,678 yards of gill nets, revenue of	13,934
121 seines	1,307
554 hoop nets	2,770
Hook and night lines	217
Nepigon license fees	1,425
Dip nets	150
	<hr/>
	\$46,303

A small surplus is claimed over and above expenditure. The loss to the province owing to depletion is not mentioned, nor that we are paying more than double price for fish of an inferior quality.

NINETY-FIVE PER CENT. EXPORTED.

Ninety-five per cent. of the catch is exported. In an export trade of any kind the best samples or stock are usually shipped; 1,128,615 lbs. would be Ontario's proportion (5 per cent.) of the 22,572,300 lbs. fish caught in 1905. An increase in price of 5c. per lb. means a loss of \$56,430 to the Ontario fish con-

sumers. It is admitted that the fisheries are being destroyed, and that the best of our commercial fishing waters are fast approaching the condition of Lake Ontario.

That, what once were, our magnificent lake fisheries should be saved from destruction goes without saying. But there are difficulties to be surmounted.

CUT OUT DESTRUCTIVE NETS.

If the destructive small-meshed pound nets are abolished, as it is admitted they should be, a revenue of \$26,500 vanishes. If seines are condemned as destructive and barbarous, that takes another \$1,307 from revenue. If the small gill net mesh is increased to five inch extension, as it must be to save the fisheries, half the gill net licenses would be abandoned; that would be another loss of \$6,697. All the hoop nets, \$2,780. Without revenue to meet expenditure, the present system would collapse, and if the present system is continued the fisheries will collapse.

THE SICK FISHERIES.

Departments, or branches of departments, are frequently conducted without revenue that will meet expenditure, but compensation and indirect advantages are looked for in the shape of improvements or increased wealth to the country. It would be very exceptional to conduct a department on those lines for the purpose of destruction. The Fishery Department had the dry rot. Staff and overseers had simply to look at something which was gradually disappearing.

It only requires a moment's thought to know that if fish that have never spawned are taken and marketed, extinction must follow, and within a very short period. The bulk of the fish taken were undersized and immature.

FEDERAL GOVERNMENT'S RIGHTS.

The Federal Government, by the decision of the Judicial Committee of the Privy Council, has the power to abolish the

various condemned nets and meshes now in use for destroying fish. If it neglects or refuses to take any action, the province has the power to withhold licenses to fish with such nets.

THE DEADLY POUND NETS.

A description of the various nets now in use in our waters may be of interest.

The pound net is the principal engine and is an American invention. It is a fixture. It begins with a lead about 70 rods long running from near the shore to what are called hearts; the fish so led into the hearts are there further guided through an entrance into a pot or pound, with a mesh an inch square. That pot can be lifted and the fish taken into boats. This pot is set in about 20 to 30 feet of water. The net is set with stakes 45 to 50 feet long, firmly driven and set, so as to withstand storms. A pound net pot 20 to 25 feet square and 20 to 30 feet deep gives some idea of this destructive engine. Ten tons of fish can easily be taken at a lift. Its fatal defect is that it destroys whitefish and lake trout not only five inches in length, but millions of recently spawned fish are mixed up with sometimes tons of the larger fish when the pot is lifted. Professor Prince has described how these minute fish, sometimes barely visible to the eye, are destroyed where seines are drawn. The destruction is even greater when a pound net pot is lifted. The pot is a sort of refuge for minute recently hatched fish. They go through the small inch bar mesh for shelter and to their destruction.

THE CONDEMNED SEINES.

The seine is too well known to require description. Professor Prince condemns it wholly for commercial fishing, but one of its most objectionable features is not mentioned. To draw a seine it is apparent to any one that every obstruction in the water must be removed. Stones, boulders, old stumps, logs, branches, weeds, every refuge the small fish have, and in many cases supplying them with food as well as shelter, every

protection and refuge nature gave to the small fish to make them safe from their enemies, must be removed. The seine is cruel as well as destructive. It was justifiable in the early days when settlers required fish to eat, and could not get food in any other way. Those conditions no longer exist. Moreover, the fish now taken with seines are shipped to the States.

THE GILL NETS.

Gill nets have fewer objectionable features than any other net, and are ample for commercial fishing in our waters. They are usually set in deep water. The meshes are of a size to take the commercial fish: lake trout, whitefish and herrings, also blue pickerel. This last fish is almost as objectionable in our waters as the carp, but happily it has made its habitat in the east end of Lake Erie. It is as distinct from the dore, or yellow pickerel, as the wolf is from the lamb. The blue pickerel go in shoals like herrings; when on the run (usually in the fall) tons are taken at a lift in herring gill nets. Very few herring are then taken; they seldom run together. A three-inch extension mesh is correctly used for herring, but a too small mesh is now in use for whitefish and lake trout. That objection to gill nets can be rectified. Gill nets are now fished too late in the fall, taking the finer kinds of fish when congregated for spawning.

TRAP NETS.

The trap net is *par excellence* the poacher's net. It is practically a small pound net, anchored, and not being set with stakes, and no portion of it above water, can only be found by grappling. Poachers can go direct to it, its location being marked by shore objects. If our fish were not shipped to the States from every fishing point, the poacher's occupation would be gone. It is the high price now paid for our fish, shipped to the States, that makes poaching pay.

HOOP NETS.

The hoop net is a small net set in water four or five feet deep. Wherever set it is an indication that fishing in that locality is about played out. This net can be put in the water for about \$5. Wherever set (like the seines) it usually destroys game fish, and consequently rod-and-line fishing. Five hundred and fifty-four of these hoop nets are now licensed.

BLACK BASS AND STURGEON

Two fishes, strangely distinct in their character, are now attracting attention; one from a sportsman's point of view, the other on wholly commercial grounds. Black bass may be described as the last of the game fish of Old Ontario. The efforts to protect them have not been successful. One defect in the present system of protection for game fish is that it is too paternal. Given proper close seasons, the enforcement of the law should be left to the county and township authorities. Up to date the local authorities have been educated not to interfere with that central power located in the Parliament Buildings.

SHOULD EXTEND CLOSE SEASON.

The close season for black bass should be extended to July 15th. Even at that date some of the fish have not spawned. It is generally known now that black bass protect and look after their young brood for a fortnight or three weeks after they take life. The young are piloted by the parent fish to localities where they can feed in safety from their predaceous enemies.

A black bass deposits from 3,000 to 10,000 eggs. As the nests are guarded by the parent fish during the hatching process, which is short, the crop of young fish is fairly complete. The angler who takes a black bass between June 15th and July 15th—that is, during the hatching and guarding process—practically destroys from 3,000 to 10,000 fish which

might otherwise have reached maturity. By extending the close season to July 15th, only one month, no amount of rod fishing would make a perceptible reduction.

ENFORCE THE CLOSE SEASON.

The present regulations limiting the catch and prohibiting sale are vexatious and are not obeyed. If the duties of constables, overseers and game club employees were limited to enforcing a close season only, and the restrictions limiting catch and prohibiting sale removed, the general public would approve every conviction for a violation of the close season. The people of Ontario do not like class legislation, and the present regulations incline that way.

The sturgeon, which even fifteen years ago had little value, is now the most valuable fish in our waters. The money is in the eggs, which, by hand manipulation being converted into caviare, reach a value of \$1 per pound. As from 15 to 30 lbs. of eggs are taken from a sturgeon, according to size, and as the meat brings from 6c. to 8c. per pound, a full-grown fish becomes of about the same value as a cow.

As this fish is captured wholly for export, and before spawning, its extinction, one might say, has been criminally rapid. Lake Ontario, as late as the 60's, abounded in sturgeon of a very large size. The catch of sturgeon in our lakes and rivers in 1897 was 1,776,950 lbs. It is now reduced to 485,200 lbs. But the most recent instance is the Lake of the Woods. A few years since 716,000 lbs. of sturgeon meat and 63,800 lbs. caviare were taken out of Ontario's half of that lake in one season. That lake is now one of the "has beens." The destruction of whitefish and trout in the Lake of the Woods is on the same scale, and all has been done since the process of destruction from present methods was fully understood.

SAVE THE FISH.

The taking of sturgeon should now be prohibited. There are enough left for seed. The eggs cannot be fertilized and

hatched artificially; experience has shown that the process of nature cannot be improved upon.

With all the appliances now in use for taking sturgeon, the remnant will vanish like a flash. Fortunately it is an abnormally reproductive fish. A full-grown sturgeon will deposit from 50,000 to 1,500,000 eggs, and the young, soon after hatching, are so well protected by natural formation as to be all but immune from attacks by predaceous fish. To protect this fish would mean an almost fabulous increase of wealth in our waters. For its destruction the province may be said to have received practically nothing in return. Even the salt, with which the eggs are cured and made into caviare, is imported from Germany, and German kegs or packages are frequently sent out so as to give the caviare the appearance of a European product.

Even now, this fishery question, this veritable heritage, has been but barely touched. One is reminded of the great Cecil Rhodes on his death-bed saying, "So little done; so much to do."

II.

There is a delusion in reference to the preservation of the fisheries which is and has been persistently published, and that is the alleged impossibility of protecting fish which can swim from our waters into the American waters.

At the time of the Boer War, the late Lord Salisbury attributed the ignorance of the English people to their studying military movements from small maps. The fishery question is not only misunderstood for the same reason, but nearly all the views published for years on the subject of the fisheries have emanated from a fishing quarter.

A GOOD TURN FROM AMERICANS.

Professor Prince, the highest authority on the subject, says: "The American methods of fishing without restriction and at all available seasons have been disastrous to their fish-

eries and, upon strict inquiry, of very little injury to ours." He gives reasons which are conclusive to all excepting those who do not wish to be convinced. Prof. Prince limits his remarks to fish, but it is the habit of birds, when a flock or bevy has been reduced or decimated, to join another flock. It is the same with animals. The Indian tribes did it. The Scotch clans also. "Anything for a quiet life" is the rule with almost everything that has life. The American fisheries are persistently worried. The Professor might have gone further and said that American methods had benefited our fisheries.

ONTARIO'S FISH RATIONS.

Figures in relation to the fisheries are interesting. Ontario has a population of 2,500,000, and the yearly consumption of our lake fish is 1,128,615 lbs. (the 5 per cent. not shipped to the States). That is less than half a pound a year for each man, woman and child. Waste in cleaning has to be considered, and the consumption by travellers in hotels and restaurants. One-quarter of a pound of fish would probably be the quantity which might be consumed in twelve months by each of our inhabitants. That means that hundreds of thousands of our people never taste fish. In fact, we have ceased to be fish consumers. Even Toronto, the centre of our intelligence, is a wretched fish market compared with an American or any other civilized city of the same size. Half a pound of fish supplied daily for a year to each inhabitant of Ontario (which would be a quarter of a pound when cooked) would require 456,250,000 lbs. That would be twenty times the entire catch of our waters at the present time.

THE OUTSTANDING FACT.

No criticism of these figures can weaken or affect the argument that our birthright has been sacrificed in this respect, and not even a mess of pottage obtained for it.

With our rapidly increasing population and wealth, and

a crying demand for "pure food," this is a matter which must now be looked at "straight in the face."

When the late Government took over the fisheries in 1898 the American tariff should have been considered. That alone, apart from the depletion of the fisheries, was a justification to encourage home consumption. There was then, and is now, an import duty on our lake fish going into the United States. That amounted to \$58,884 on the 21,553,655 pounds we sent there in 1905. That was the smallest sum we ever paid the United States for allowing them the privilege of eating our fish. Had we salted or smoked those fish then we would have paid three-quarters of a cent per pound duty, or \$161,652. That latter duty was, of course, prohibitory, on salted or smoked herrings, and intended to be so. Were it not so it would be increased. We have thus not only destroyed our fisheries for the benefit of the Americans and given them \$58,884 in Customs duties (yearly), but we have been instrumental in building up a great salting and smoking fish industry in the United States, which, had we restricted exportation, might have been a Canadian industry.

AN INDUSTRY WE SHOULD HAVE.

It is not only fresh fish which might be (and which a few years ago were) peddled throughout the townships, but salted and smoked fish would not only be largely consumed in our cities, towns, and villages, but would also be distributed by peddlers throughout all parts of the country districts, mining and lumber camps.

A salting and smoking industry in this province at the present time is undeveloped. It is carried on in a slovenly, spasmodic manner. The people of Ontario have not only been given a distaste for fresh fish by being supplied with undersized, half-grown, soft fish, not sufficiently grown to become flaky, and wholly devoid of taste, but the smoked and salted fish are selected from a quality too stale for transportation to the United States. And as the fishermen say, "They must be

salted or smoked to save their lives." Any one familiar with our fishing industry would not touch a salted or smoked herring.

IN THE LOWER PROVINCES.

There is nothing new in this; it has happened elsewhere. In the last report of the Marine and Fishery Department, issued at Ottawa, page 108, it says (in reference to one of the lower provinces): "Our fish are put up in the most shameful way. Most of the fishermen use more salt than is needed. One object is to cheat. The fish remain so long out of the water before they go into the salt that it is impossible to cure them. It is necessary to have herring perfectly fresh, and they should at once be sprinkled with salt. The gills and gut must be taken clean away with a sharp knife, and the roe and milt left in the fish; second Liverpool fishery salt should be exclusively used.

Any one reading this report in full and with a knowledge of the unwholesome way in which our lake fish are now cured for the market would have some idea of the great possibilities of a salting and smoking industry in Ontario if properly conducted. It cannot be done in a slipshod way by fishermen, and from stale fish. It is an industry requiring special knowledge and skilled labor.

This industry can never be established under the present licensing system. Both the quantity, quality and price of the supply would be too uncertain for any one to venture capital in it. 5,000,000 lbs. of herrings were taken in Ontario waters in 1905, clearly a foundation for an industry with great possibilities.

PURE FOOD.

There is now a cry in Ontario, and, indeed, throughout the world, for pure food. Boric acid, a chemical almost as deadly as arsenic, makes old meat look fresh, and it gets into the canning factories in a specially prepared salt. Sugar has

many deadly substitutes. Starch in almost every form is paraded as a breakfast food and a "health food"; and still we sacrifice to the gain of a few that article of absolute purity, the fresh fish of our lakes, which nature gave us a free gift. And this is the end of that bombastic announcement made in 1899, "that there would soon be a large increase in the supply of fish and a perceptible improvement in the fishing industry."

CHEAP FISH NEEDED.

Cheap electric power has aroused the whole of Ontario. Surely this question of cheap, pure fish would be a greater boon! Fish can be distributed cheaply. Our existence in this world is a misery without health, and that health we have not at present. Catarrh, eczema, piles and rupture are frightfully prevalent. These and many other complaints, the result of heated blood, are caused usually by a continuous, unbroken, strong meat diet from infancy to middle age. It was an economy with the early settlers to have fish upon their tables; a breakfast table without fish was exceptional. Their tombstones register eighty, eighty-five and ninety years, and they were free from complaints making life a burden.

This in a measure the late Government in 1898 and subsequently had the power to rectify. It did not rise to the occasion, although in touch with the Ottawa authorities. Every defect in previous management was intensified, and we fail to discover that the late Government had the faintest indication of a capacity to handle and develop this great heritage.

JOINT AUTHORITY.

A few years before Confederation, when the government of the country was at a deadlock, "some joint authority" was proposed as a remedy. That is what we now have in the fisheries. The Privy Council left with the Federal Government the power to make such regulations as would prevent the provinces from destroying the fisheries. That power has been exercised in a peculiar manner.

BECAME DISHONEST TRUSTEES.

In the month of June, 1904, in anticipation of the Ontario elections, the then Opposition were "Alverstoned" in the Lake Erie shore constituencies. A sop was thrown to the fishermen by the Federal Government by suspending the close seasons. At the same time the reserved waters in the North Channel of Georgian Bay were opened for destruction.

PRESENT SYSTEM BAD.

There can be no future for the fisheries under the present system. It is impossible to look into the future, but surprises can be guarded against. Government ownership and municipal ownership have of recent years become an accepted principle, and in many cases highly advantageous. The time is now opportune to make some suggestions as to the feasibility of our Fisheries Department being organized to manage the industry direct, in case the Federal Government makes regulations disorganizing the system left as a legacy to the present Government. The report of the Dominion Fishery Commission may be delayed, but it is an act of courtesy as well as policy to await it a reasonable time.

A NEW SCHEME.

Any proper regulations expected to be made either by the Federal Government or the province to save the fisheries would reduce the catch one-half at the least, probably to 12,000,000 lbs. The coarse fish, large in quantity, and not marketable in Ontario, would still continue to be exported. If taken under provincial management, the license system being abolished, profits would be made from exported coarse fish that would pay the greater portion of the expenses in carrying on the industry. The catch of yellow pickerel, whitefish and lake trout, no longer caught immature, would be greatly reduced in quantity, and sturgeon no longer taken. A very limited number of tugs on the Great Lakes would be ample

to carry on the fisheries on these lines. Every provincial tug would become practically a "cruiser" and an aid to Captain Dunn and the *Vigilant* in destroying nets illegally set in our waters. Export ceasing, except under provincial management, and a supply of ice (absolutely necessary for export) not being general, irregular shipments would be practicable to a very limited extent. Canadian poaching would cease. A carefully considered report, made under authority by a competent commission, might disclose that Ontario, city, town and country, could be supplied with the finer kinds of lake fish in perfect condition at rates within the reach of all the people, the industry at the same time easily maintaining itself.

III.

The destruction of the fisheries of the Province of Ontario has been an enormous wickedness. For some years prior to 1892 representations were made to the Fisheries Department at Ottawa that the destruction of the fisheries of the north part of Lake Huron, the Georgian Bay and Lake Superior were following upon the same lines which had depleted Lake Ontario, Lake Erie, the Detroit River, and the south end of Lake Huron.

THE TUPPER COMMISSION.

Sir Charles Hibbert Tupper, Minister of Fisheries, in 1892, appointed a commission to visit all the principal fishing points on the Great Lakes, with power to take sworn evidence and report. This commission was in all respects similar to the commission recently appointed at Ottawa, the report of which we are now awaiting.

A VALUABLE REPORT.

The report of 1892 was printed in a Blue-book in 1893, and to this day is a valuable text-book for any desiring to

understand the fishery question. It is a book of 500 pages, and the correctness of one line in it has never been disputed.

In 1893 Sir Charles Hibbert Tupper was in Paris, a member of the Behring Sea Commission. During his absence the question of Federal or Provincial ownership of the fisheries was formulated. In October, 1893, Sir John Abbott, Premier, died. In December, 1894, Sir John Thompson died. In January, 1896, six Conservative Ministers resigned. At the general elections in June of that year the Liberals won.

THE RECORD OF A PUBLIC CRIME.

The commissioners' fishery report of 1893 then fell upon stony ground. It was practically shelved. It did not get into general circulation, but copies of it could be seen in the Public and Legislative Libraries and in the office of the Ontario Department of Fisheries. It is interesting reading, and rises up in judgment against all in authority who disregarded it. Some examples of the evidence taken will be instructive at the present time:

George Knight, fisherman, Collingwood, sworn, said: "Whitefish are now scarce all over the Georgian Bay. We get very few, indeed. Fifteen or sixteen years ago they were very plentiful. There are now (1892) four times as many nets in the Georgian Bay as there were fifteen or twenty years ago. These fish have taken some other course. The spawning ground was once on this side of the bay, but they do not come any more. It is a hard matter to make a living now, the fish are getting so scarce."

Norman Saunders, fisherman, of Collingwood, said: "This is a whitefish bay naturally, but the whitefish have been getting scarce for about eight years, caused by double the amount of fishing. November, the spawning month, used to be the best for whitefish."

FISHING IN SPAWNING SEASON.

William A. Clarke, fisherman, Collingwood, said: "Loads of young, immature fish are now taken at Thessalon

Point and Dollar Bay. There is a current there which they frequent for food, and it is protected. I have noticed this for two years: in a whole cartload you would not get one over 3-4 to 1 1-2 lbs. I took particular notice of them passing in transit. These immature whitefish, as a rule, pass on to the American markets. The great quantities of immature whitefish wasted would in a couple of years have become good fish. Whitefish have fallen off thirty per cent. anywhere in the Georgian Bay. Twenty years ago, if a man had taken a gang of nets to Squaw Island, the same as we are now, it would have taken a small schooner to carry the fish away. There are not any more whitefish on those grounds. The decrease has been caused by over-fishing, and fishing in the spawning time. There are none on the south shore. Large quantities of small, immature fish are now shipped, which are principally caught in the North Channel above Little Current. There were never so many caught as in the past season (1891) and shipped at Collingwood and Wiarton. A proper-sized mesh is the true remedy to prevent this destruction of immature fish. Some obey the law and some do not. It is a one-sided affair."

THE SMALL MESH NET'S WORK.

At Meaford at the same date it was the same story. John McCree, fisherman, Meaford, said: "A two-pound whitefish is not a mature fish; over-fishing has destroyed the fisheries on the south shore of the Georgian Bay; whitefish are now a thing of the past on this shore; they are the most profitable fish if they could be caught."

Gilbert Peter McIntosh, fish-dealer, Meaford, said: "A four and a half inch mesh is too small for these waters. A five-inch mesh should be the minimum. The Autumn mesh should be five and a half. Fish now caught are immature and unable to breed. Some shipments average three-quarters of a pound to one and a half pounds, quite small fish. I have handled them. Formerly we could not dispose of such fish, but we can do so now." (1892.)

THE FISH JUST DISAPPEARED.

James Pilgrim, fisherman, Meaford, said: "Whitefish have left here; they don't come here; they have just disappeared."

Adam H. Stephen, druggist, Meaford, said: "We used to catch great numbers of whitefish on the shore here. When I was fishing, eight years ago, eight miles off Meaford, I have taken 1,500 out of one gill net. Other fishermen did the same. They were full of spawn; they all left at once, and for a number of years we have not fished it. The mesh should now be five inches at the least."

John Nelson, fisherman, Meaford, said: "The fishermen follow the whitefish to the North Shore in October. The finest and largest whitefish and salmon trout go there to spawn, and are not caught there at any other time. They are caught right on shore on their spawning ground. I have seen forty boats of us within three miles—this is general with other fishermen. This is the time to catch these large spawning fish. The boats come from Manitoulin Island and all parts of the Georgian Bay. The fishermen follow the fish down from the north shore of the Manitoulin, and at this time the spawn is running freely from the fish. Whole families of fishermen have left Meaford, who formerly made their living there."

THE MIDLAND CONSENSUS.

The evidence taken at Midland was almost identical to what has been written; with these additions:

"A great many fish are spoiled by the nets being out too long. The fish are spoiled. Local men take these dead fish and salt and smoke them."

"If the fishing goes on as at present the fishermen cannot live."

"Close seasons are sound in principle, but have never been enforced."

"The nets used in close seasons are generally sunk, and difficult to find without grappling irons."

"Small fish are thrown away on the ice below Wau-
baushene."

"Quantities of fish are lost by having too many nets out, and leaving them in the water too long. The fish drown and die. The good fish are kept separate for the American market; the culls, which cannot be sold, are salted, but no one seeing this done would eat them."

"There are ten boats fishing now where there was one ten years ago, making it appear that there is no falling off of fish."

"The excessive quantity of nets used has as much to do with the waste of fish as the stormy weather; fishermen now fish in 420 feet of water, twenty miles out."

THE LATE JAMES NOBLE.

Mr. James Noble (since deceased), of the firm of J. & C. Noble, gave valuable evidence. He, being duly sworn, said: "I live at Killarney, and am engaged in fishing for the last seventeen years. I am a dealer in fish also. The 5-inch mesh became unprofitable and we use a 4 1-2 inch mesh to take the smaller sized fish; we pay 3 3-4 cents per pound to the fishermen for whitefish, salmon trout, pickerel, and black bass. We ship our trout to the Buffalo Fish Company, *via* Collingwood.

"There are many other companies on the Georgian Bay which sell to the Buffalo company—C. Duffy, of Byng Inlet, and Purvis Brothers, at Gore Bay. The Buffalo company have two tugs which are sent around to gather fish from the other companies; our contract calls for 1,600,000 lbs. of fish. We furnish the fishermen with such fishing gear as they may want: boats, nets, etc., and sell them such provisions as they require. Our business was first commenced about fifteen years ago—in 1877—and has been increasing every year since. We at first dealt only with a Canadian company, which sent fish throughout Canada and to the States. That lasted about one year. The following year we contracted

with the Buffalo company; we then bought whitefish and salmon trout from the fishermen at 4 1-2 cents each. These fish now sell in Toronto and other Ontario towns and cities, when they can get them, at 40 cents to 75 cents each. Our business finally ran up to a million and a half pounds yearly. This was a result of increased plant, more nets, tugs and boats. We do not expect a continuance of this business, as there is now a considerable decrease in the fisheries—we all know that well! If this excessive fishing goes on at the same rate, the fishing industries in the Georgian Bay and North Channel cannot last long. Therefore we think some strong measure must be brought to bear to protect the fisheries, otherwise the formerly great fisheries in this section of the province will soon be done away.”

“The pound nets with 1-inch and 1 1-2 inch mesh have destroyed immense quantities of young fish of all kinds. This should be prevented, as it is one of the greatest evils. Fish at the spawning time should be protected, as they are not so good as at other times. They are then softer and have more slime upon them, and are not so suitable for transport. They spoil much more readily at this time. Fishermen could not stand a proper 5-inch mesh now, not if they were given three years to make the change; they could not make it pay. They would not take out licenses. The fisheries will never recuperate unless better protected and they get into better hands.”

ON THE BROAD ROAD.

Notwithstanding all this evidence from men of high standing with a special knowledge of the subject, fishing tugs from 1892 to 1905 were doubled in number, and fishermen increased. Gill nets jumped from 287,554 yards to 879,800 yards in the North Channel, and from 80,000 yards in the Georgian Bay to 863,100 yards; at the same time the catch of whitefish in the North Channel fell from 4,002,706 lbs. in 1892 to 660,430 lbs. in 1905, a decrease of 3,342,276 lbs., and in the Georgian Bay from 3,627,400 lbs. in 1892 to 333,-

620 lbs. in 1905, a decrease of 3,293,780 lbs. and fishery influences prevented the introduction of a 5-inch mesh.

The fisheries of the Georgian Bay and North Channel are even now as much a thing of the past as the late Government, which permitted them to go to destruction.

A letter has recently appeared in the *Mail and Empire*, attributing this waste of our wealth to suckers. The "suckers" who have steered our fisheries to destruction are very much alive, and in business in Chicago, Detroit, Buffalo and New York. The people of the province are now beginning to understand the full enormity of the reckless, senseless, and, to put it mildly, questionable management of this great heritage.

In the Detroit River, where millions of whitefish were taken during the spawning season, not a sucker was taken. They were in their proper feeding grounds. It was the same along the Lake Ontario shore when the great hauls were made during the spawning season. No suckers were taken, although seines draw in every fish. It was the same in Lake Huron, on the great Au Sable spawning beach: no suckers were there. Until quite recently sturgeon were considered spawn eaters. Scientific inquiry and the use of the microscope have proved the contrary.

DOES THE SUCKER EAT SPAWN.

It is more than doubtful whether the sucker is a spawn eater. The suckers were placed in our waters by the great Creator as a food fish for other fishes. They are the first to spawn in the early spring, running up the rivers and creeks in advance of all other fishes. All fishes can follow them with a certainty of having their proper food. Suckers are not only a pilot fish, but a complete commissariat department in our waters. They have an exceptionally large swim bladder, which, when done feeding, enables them to float at ease from the bottom, making them a conspicuous and easy prey for predaceous fish. A ten-pound pike or maskin-

once will swallow the largest sucker. Nature's plan with this fish was clearly to protect the finer kinds of fish. All fish with teeth are cannibals and will devour the young of their own species if they cannot get the food to which their natural instincts direct them. In trout culture it is well known that the larger and smaller fish must have separate ponds. The female of the black bass is a born cannibal, and is driven away from the young brood by the male for this reason.

When our Great Lakes were first opened for commercial fishing, whitefish, the most helpless of all our fishes, predominated over all others, and suckers abounded. In Lake Ontario and Lake Erie, following the destruction of salmon trout, the burbot (also called ling or eel pouts), a most destructive fish, increased in vast numbers, but there has been no perceptible increase in suckers. In Long Point Bay, the great breeding and spawning place for Lake Erie, there are few suckers. The hard or predaceous fish feed upon them. The suggestion that suckers destroy our whitefish is that sort of defence recently put in by a man in England caught killing a sheep. He said, "It tried to bite him."

IV.

In 1899 the first report of the Ontario Fisheries Department was issued. It is there stated that the Hon. Mr. Hardy, then Premier of Ontario, at a conference held at Ottawa, "was assured that in relation to the fisheries there need be no serious apprehension of any conflict in authority in the exercise of their several functions, and generally, that the unity of opinion on the part of both Governments would prevent all friction."

THE GOVERNMENT KNEW.

It may not be generally known that the Hardy Government, and subsequently the Ross Government, were fully aware of the then deplorable condition of the fisheries. The

same report (1899) says: "That the department found, upon assuming the administration of the fisheries, that the fishing industry of the Great Lakes was practically controlled by American companies, which had established supply houses and agencies for the purchase of fish, etc., at different points on the lakes. This control had been acquired through the inability of the fishermen to discharge liabilities incurred for nets, supplies, etc., furnished by the American companies; that the licenses are applied for and issued in the names of the fishermen, but there is reason to believe that the substantial profits pass to the companies, while the fishermen themselves in many cases occupy positions little better than those of day laborers."

SUBSTANTIAL PROFITS.

The report of the following year (1900) shows that no effort was made to prevent these "substantial profits" passing to the companies—meaning the American trusts. The next report (1901) comments favorably upon "the high prices obtained for fish." What are called "high prices" are not what the fishermen get. It is an arbitrary valuation put upon the catch by the department, based upon quotations in the *American Fishery Gazette*.

ABOLISH CLOSE SEASONS.

The report of 1902 suggests that all close seasons might be abolished, and to depend upon hatcheries to restock the lakes. It says: "A decrease in whitefish is everywhere reported, and unless a large output from the hatcheries is made there can be but one result—one that will ever be deplored—its complete annihilation. Its only salvation is the hatcheries."

The report of 1903 not only shows a diminished catch, but states that many fishermen, finding other employment more remunerative, had abandoned fishing. Propagation of fish by hatcheries is again recommended.

The report of 1904 says: "The fishermen obtained high prices during the whole year," the American trusts being the fishermen; and it is suggested that we should adopt the American plan of unrestricted fishing—in season and out of season.

LICENSES FOR CANADIANS.

The report of the year 1905 says: "That though fewer fish were caught, the prices were better." It is admitted that the American companies, or trusts, still controlled our fisheries, "and that if future licenses were confined to Canadians it would require all the catch to supply the home market. In that case the Canadians who are operating American plants in our waters would have no difficulty in obtaining equally lucrative employment in other fields of labor."

THE SPONGE THROWN UP.

This is surely a lame and impotent conclusion to eight years of management of the great heritage. A perusal of these seven annual reports creates a doubt as to whether it is not possible to "fool all the people all the time." You search in vain throughout the fishery reports for one line indicating that cheap, wholesome fish for the people of Ontario is even thought of, always excepting the first report which promised them. The whole system of management seems to have been dominated by the American plan of unrestricted fishing, export to the States, and hatcheries as a remedy for depletion.

CANADIAN *vs.* AMERICAN.

But there is this difference between Ontario and the States—the Americans, with their hatcheries, plant fish in their waters, to be consumed in the States. They stock all their rivers, creeks and small lakes with game fish of all kinds, as well as planting fry of the commercial fishes in the Great Lakes. It becomes necessary to interest all classes to warrant a system of reproduction by hatcheries, with its enormous attendant expenses. But would our Provincial Government or our

Federal Government introduce a system of hatcheries and unrestricted fishing to supply the Americans with 95 per cent. of the catch, and our fishermen reduced to a condition little better than that of "the man with the hoe"? The suggestion is too absurd for a moment's consideration.

ONTARIO'S THREE HATCHERIES.

There are now three hatcheries in Ontario. The first was founded by the late Samuel Wilmot in 1867, at Newcastle, and purchased by the Government of that day. Another is at Sandwich, on the Detroit River, founded in 1876, and one at Ottawa, in 1890. From these three hatcheries 600,000,000 whitefish, salmon trout and pickerel fry have been planted in our Ontario waters, and where are they? All that survived to be as large as herrings were caught in our fishermen's small-meshed nets and shipped to the States.

INADEQUATE RESULTS.

It is not possible to report any satisfactory results from the planting of these millions of fish in our waters, nor can any return of any kind be discovered to warrant this great expenditure of money. On the contrary, up to this date it has been an encouragement to the American trusts to keep control of our fishing industry, and rake in the "substantial profits." If the great heritage can now only be preserved to us through the instrumentality of hatcheries, a clean sweep must be made of the present wasteful system of fishing and export prohibited of all fish artificially propagated.

AN EXPERT OPINION.

In reference to this, Professor Prince says: "As I have repeatedly pointed out in various Blue-books, it is useless to expect results in artificial stocking of rivers and lakes unless proper protective measures are taken to prevent the fish being exterminated. The Great Lakes—Erie, Ontario, Huron and

Superior—have been planted for long periods of years with vast quantities of fine fish, and yet the old plenteousness has not been restored. Incessant over-fishing, and all kinds of destructive fishing, as well as the capture of small, immature fish, has gone on without limitation.” And the professor might have added, “with unlimited extension.” You will search in vain in the seven annual reports of the Ontario Department of Fisheries to find that these words of warning and wisdom had made any impression. On the contrary, everything that was wasteful and unrestricted was intensified.

NEVER TASTE GOOD FISH.

The people of Ontario have very largely emigrated from the British Isles, where they were accustomed to the fishes of the sea. The excellence of our whitefish, salmon trout, pickerel and others of our fresh-water fishes have been unknown to them. The limited supply coming to the cities and towns (even herring) have been so high priced as to be beyond the reach of the masses. The supply has also been undersized, tasteless, soft and spawning. Not one in a thousand has ever tasted a full-grown fish in good condition. No blame can be attributed to the present generation or to the new population of recent years for the little interest they have hitherto shown in the protection and preservation of our lake fisheries. But this throws the greater blame upon the department, where they had full knowledge of the excellence of the fish and the value and extent of the fisheries. Where there should have been activity and careful supervision there was supineness and neglect.

SURRENDER TO THE TRUSTS.

The great heritage has been wasted and permitted to be controlled by American trusts. The millions of fish propagated in our hatcheries at enormous expense have been destroyed before reaching maturity. The American companies

have been permitted to accumulate fortunes by making day laborers of our fishermen and depriving the people of Ontario of their rights. The province practically makes nothing and loses everything by this "give away" of our heritage. The very worst disclosures in life insurance circles cannot compare with this mismanagement. Whether the great heritage has been scuttled and pillaged by pirates or allowed to drift upon the rocks by an inexperienced crew, the position remains the same—our fisheries have reached extinction point.

THE HATCHERIES ACCOUNT.

For one year, ending June 30th last, \$13,378.27 was expended in maintaining the Newcastle, Ottawa and Sandwich hatcheries. This expenditure has continued annually for nearly forty years, sometimes more, and occasionally a less sum, and the entire output from these concerns has been wasted. The amateur savants in the department who now report upon the habits and condition of the fisheries should be assisted or replaced by some biological expert with special knowledge, enabling him to give a report upon the food and habits of our lake and other fish, with a view to their preservation. This can only be done by a resident officer. Prof. Prince has given us invaluable information. His duties extend from the Atlantic to the Pacific, but his views would always be of value, and would be freely given in consultation with an Ontario biological expert.

AN EXPERT NEEDED.

The necessity for such an officer is too clearly shown in the various Ontario fishery reports. The phenomenal increase of pike in Burlington Bay is there explained by one official by the carp having driven the pike off their feeding grounds. Predaceous fish make their habitat where they can get their food easiest. A biological expert would no doubt explain this phenomenon by finding that the young of the carp had become the food of the pike, and that carp were an attraction for

them. For this reason a close season might be recommended for pike to ensure their increase as carp destroyers.

THE BLACK BASS AND THE CARP.

This same phenomenon has occurred in Long Point Bay. The black bass of Lake Erie have concentrated there since the coming of the carp to such an extent and in such numbers that thousands of bass have been taken to stock the rivers and small lakes of Ontario without apparently depleting the Long Point Bay waters. The black bass now feed upon the young of the carp, and no longer prey upon the young of their own species. Another amateur savant in the same fishery report says a two-pound whitefish is a luncheon for an eight-pound salmon trout. A salmon trout is only half grown at fifteen pounds' weight. Such a statement tends to encourage the destruction of immature trout. We have evidence that lake trout and whitefish have separate feeding grounds and do not herd together. When the whitefish come to the shores to spawn the lake trout have spawned and left. A lake trout has been opened for inspection and six herring found inside.

THE FOOD FOR THE TROUT.

The herring is a graceful fish, built to be swallowed by other fish. A two-pound whitefish has a hump on its back, and, as fish do not chew their food, could not be swallowed. Whenever the salmon trout have been reduced in numbers from over-fishing there has been a corresponding increase in the herring, the fish they preyed upon. This is very apparent in the Georgian Bay and Lake Erie. The views of amateur scientists usually tend to confusion.

RUNNING THE GAUNTLET.

Last year over 30,000,000 whitefish fry were deposited in the Detroit River from the Sandwich hatchery, on the supposition that they would be carried by the currents of the river and the lake to the deep water at the east end of Lake Erie,

there to mature. On this eventful journey of nearly 300 miles, these small whitefish ran the gauntlet of two hundred and fifty Ontario small-meshed pound nets, beginning at Pelee Island. An examination of the thousands of minute and small fish crushed and mangled at every lifting of these nets should be made to ascertain if these hatchery fish are destroyed in infancy. If they are, the pound nets should cease their deadly work, or the hatchery its useless efforts and expenditure. It may even be found that the drawing of seines in the Detroit River to get the eggs and milt for the hatchery may destroy millions of naturally fertilized eggs, which would have produced fish by natural process and without expense.

ITS USEFULNESS GONE.

The run of whitefish to the Detroit River has been so reduced that the Sandwich hatchery may yet cease its work as a whitefish establishment. In this connection, a remarkable circumstance happened with the Newcastle hatchery. This hatchery was established to preserve the run of sea salmon, which then frequented Lake Ontario for spawning. Whether the female salmon objected to the rough handling in this piscicultural lying-in establishment, or the absence of trained nurses, is not known, but in a few years the run of salmon from the sea wholly ceased, nor has it ever been renewed. It was then converted into a salmon trout hatchery and fertilized eggs from Wiarton sent there for treatment.

AN OPEN QUESTION.

Many fishes cannot be artificially propagated. It is by no means settled that the artificial planting of whitefish in our Great Lakes has been a success or ever will be. The planting of salmon trout may be. With the salmon trout, however, there is this present difficulty. The males precede the females to the spawning beaches and are netted before the females follow on. The result is that milt from the male fish is

obtained with the greatest difficulty to fertilize the eggs when the females are taken and stripped. This earlier destruction of the male fish would also waste the eggs deposited in the lake for fertilization by natural process. Unless the close season for salmon trout and whitefish is made to begin October 1st in all the lakes, regardless of climatic conditions, these fish are doomed. Truly our fishery department in the past had a plentiful supply of that "little knowledge" which has been described as a dangerous thing.

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